



BIOL 1406 General Biology I Lecture

Course Syllabus: Fall 2017

"Northeast Texas Community College exists to provide responsible, exemplary learning opportunities."

NORTHEAST TEXAS
COMMUNITY COLLEGE

Professor Jim Ward

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| Office Hours | Monday | Tuesday | Wednesday | Thursday | Friday | Online |
|--------------|---------------------------------------|-----------|--|------------|--------|--------|
| | 9:00-9:30 11:00-12:30 1:00-1:30 | 1:00-1:30 | 9:00-9:30 11:00-12:30 1:00-1:30 4:30-7:30 | 12:30-2:00 | | |

The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Catalog Course Description (include prerequisites): This course is a study of the biological sciences for students who plan to major in biology or pre-professional studies or to fulfill the laboratory science requirement of other majors. The course utilizes an integrated approach and emphasizes the molecular basis of life, cellular organization, bioenergetics, Mendelian and molecular genetics.

3 Hours of Lecture plus 3 hours of Lab course work per week. Lecture meets 2X/week; Lab meets 1X/week.

Required Textbook

Raven: Foundations of Life Volume 1 with Text with Connect

ISBN 9781308806068

Required Lab Manual

NTCC General Biology I Lab - Hearron

NTCC Bookstore

Recommended Readings

Chapters 1-15 in Lecture Textbook; Lab Units 1-14 in Lab Manual

Other Course Requirements

- Notebook along with pens/pencils for note taking during class. Tests must be taken with #2 pencils.
- 6 scantrons (5 lecture exams, 1 final exam)

Student Learning Outcomes

1. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking, scientific problem-solving, and teamwork to make informed decisions in the laboratory.
3. Communicate effectively the results of scientific investigations.
4. Describe the characteristics of life.
5. Explain the methods of inquiry used by scientist.
6. Identify the basic properties of substances needed for life.
7. Compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.
8. Describe the structure of cell membranes and the movement of molecules across a membrane.
9. Identify the substrates, products, and important chemical pathways in metabolism.
10. Identify the principles of inheritance and solve classical genetic problems.
11. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
12. Describe the unity and diversity of life and the evidence for evolution through natural selection.

Lectures & Discussions

CH 1 - The Science of Biology

CH 2 – The Nature of Molecules and the Properties of Water

CH 3 – The Chemical Building Blocks of Life

EXAM 1 (CH 1-3)

CH 4 – Cell Structure

CH 5 – Membranes (Diffusion/Osmosis)

EXAM 2 (CH 4-5)

CH 6 – Energy and Metabolism (Enzymes)

CH 7 – How Cells Harvest Energy (Respiration)

CH 8 – Photosynthesis

EXAM 3 (CH 6-8)

CH 10 – How Cells Divide (Cell Cycle and Mitosis)

CH 11 – Sexual Reproduction and Meiosis

EXAM 4 (CH 10-11)

CH 12 – Patterns of Inheritance (Mendelian Genetics)

CH 13 – Chromosome Genetics

CH 14 – DNA: The Genetic Material

CH 15 – Genes and How They Work (Transcription and Translation)

EXAM 5 (CH 12-15)

Final Exam Review

FINAL EXAM (CH 1-8, 10-15)

Evaluation/Grading Policy:

LECTURE: 70%

20% - Connect Homework Online

60% - 5 Lecture Exams

20% - Final Exam

LABORATORY: 30%

Grade Assignment:

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = 0-59%

Lecture Assignments

Weekly quizzes and/or homework will be assigned to check your understanding of classrooms discussions and reading assignments. These are completed online in Connect. You will need to access Connect the first week of the semester and register your keycode to complete your assignments. Each assignment has a posted due date for completion. Due dates in Connect are firm – no makeups for missed homework.

Tests/Exams

The lecture exams may include both objective questions (multiple choice, matching, etc.) over classroom discussions, notes, text materials, and readings as well as descriptive questions requiring detailed explanations over broad themes. Success on the exams is a function of anxiety regulation, test prep, study strategies, and studying for retention. Retention requires repetitions, which requires time! Scantrons will be required for the major exams. Tests will not be made up for any reason without prior communication to your instructor. Late arrivals must complete exam by end of class time.

Final Exam

A comprehensive final exam will be given during the time set forth by the college Final Exam Schedule. The final exam will consist of 100 objective questions (multiple choice, matching, etc.) from all chapters listed above. A scantron is required for the final exam.

Withdraw Date

The last day to withdraw from the course in **Tuesday, November 21st**. Discontinuing with the course without officially dropping the course by this date will result in a grade earned, in most instances an “F”. A stop in attendance does not equate to dropping the course.

Student Responsibilities & Expectations

Northeast Texas Community College is a “community of scholars”. As scholars, you are expected to be respectful and courteous to your peers and instructors in both lecture and lab. Scholars are expected to be on time and remain for the duration of class. Scholars are expected to embrace anxiety and manage stress to be productive and responsible at all times. Scholars understand that they, and others around them, are pursuing very important goals in their life at this time and are proactive, not reactive, in regards to the assignments and grades to ensure they are on track at all times to meet their goals.

As scholars in class, it is critical that you engage yourself in the lecture material and discussions as well as the laboratory exercises. The ability to listen carefully, record information in note form, and follow directions are important skill sets required for success in higher education. Practicing these in class prepares you to study at home where you will take the important steps toward learning the course material. This leads to the ability to retain information and describe processes on major exams. Research shows writing by hand is far more effective in obtaining long term retention than is typing! Electronic devices are allowed on non-testing days as long as they do not prevent engagement. No devices or picture taking is allowed on testing days.

As scholars, your instructor is a valuable resource for your success. I will teach to the best of my ability and provide you with a variety learning formats to help you in your effort to be successful in Biology. I deeply care about you and your academic learning experiences here at Northeast Texas. Office Hours are designed for scholars to have an opportunity to get individual questions answered and engage in learning with the professor outside of class times. Take advantage of office hours as your ultimate success in the course depends solely on YOU!

NTCC Academic Honesty Statement and Academic Ethics:

"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook." The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. See Student Handbook.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to request accommodations. An appointment can be made with Shannin Garrett, Academic Advisor/Coordinator of Special Populations located in the College Connection. She can be reached at 903-434-8218. For more information and to obtain a copy of the Request for Accommodations, please refer to the [NTCC website - Special Populations](#).

Family Educational Rights And Privacy Act (Ferpa):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered “eligible students.” In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as “directory information” may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.